

## AGC/WSDOT Structures Team Members

November 18, 2005

Attendees:	Company	Phone	E-mail
Barney, Millard	Conc. Tech.	253-383-3545	<a href="mailto:mbarney@concretetech.com">mbarney@concretetech.com</a>
Quigg, John	Quigg Bros. Inc	360-533-1530	<a href="mailto:johnq@quiggbros.com">johnq@quiggbros.com</a>
Casey, Daniel	KLM Const.	253-297-2750	<a href="mailto:dcasey@klmci.com">dcasey@klmci.com</a>
Smith, Tobin	Max J. Kuney	509-535-0651	<a href="mailto:tobin@maxkuney.com">tobin@maxkuney.com</a>
Madden, Tom	WSDOT-UCO	206-768-5861	<a href="mailto:maddent@wsdot.wa.gov">maddent@wsdot.wa.gov</a>
McCoy, Charlie	Atkinson Const.	425-255-7551	<a href="mailto:charlie.mccoy@atkn.com">charlie.mccoy@atkn.com</a>
Case, Derek	WSDOT	425-433-2002	<a href="mailto:cased@wsdot.wa.gov">cased@wsdot.wa.gov</a>
Schettler, Jim	Jacobs Civil	206-382-6322	<a href="mailto:Jim.schettler@jacobs.com">Jim.schettler@jacobs.com</a>
Schmidt, Virgil	WSDOT-HQ	360-707-7825	<a href="mailto:schmidv@wsdot.wa.gov">schmidv@wsdot.wa.gov</a>
Sheikhzadeh, M.	WSDOT-HQ	360-705-7828	<a href="mailto:sheikhm@wsdot.wa.gov">sheikhm@wsdot.wa.gov</a>
Swenson, Robb	General Const.	360-394-1407	<a href="mailto:Robb.Swenson@kiewit.com">Robb.Swenson@kiewit.com</a>
Hammer, Mark	WSDOT Mt. Ver	360-848-7102	<a href="mailto:hammer@wsdot.wa.gov">hammer@wsdot.wa.gov</a>
Olson, Ryan	Mowat Const. In	425-398-0205	<a href="mailto:ryan.olson@mowatco.com">ryan.olson@mowatco.com</a>

The meeting started at 9:00 am with the review of the previous meeting minutes and their approval.

### **AGC/WSDOT Lead Team Report**

Mo and Charlie McCoy discussed the lead team meeting; the annual AGC/WSDOT meeting is scheduled for January 5<sup>th</sup>, 2006 in Tacoma. A fuel escalation special provision has been added to one job in Redmond on SR 202; it's a multiple year job. The region also added a specification giving a maximum price on the bid, another term for this is an upset price. If this price is reached the contract won't be awarded. Most contractors didn't have a problem with this. If they didn't think they could do the work for this amount, they wouldn't spend a lot of time putting a bid together.

The DOT will be having a job fair for consultants Dec. 15<sup>th</sup>, this fair will list that jobs that the DOT will be looking for consultants to do.

The department has been tracking the escalating highway construction costs and presenting these in the grey notebook. It doesn't appear that these costs are slowing down. Steel and reinforcing steel looks like they may continue to escalate, there is a PVC pipe shortage, a lot of this product was manufactured in the gulf coast region and the production was disrupted by hurricane Katrina.

The DOT is considering using purple epoxy coated reinforcing steel, this is manufactured in northern California and is more resistant to corrosion from salt water than the normally used green bar.

### **Action Item Updates:**

### **Pile Driving Vibration Monitoring**

Jim Schettler handed out a rewrite of the new vibration specification that included vibration monitoring for pile driving. After discussing this with the contractors present they thought that the hammer energy should be bumped up to see what the effects would be for a hammer that develops about 130,000 ft.-lbs. instead of the 36,000 that Jim had accounted in his analysis.

**Action Item:** Jim is going to reevaluate accounting for larger pile drivers (130,000 ft.-lb. hammer.) and propose a specification at the January meeting.

### **Stay in Place Galvanized Expanded Metal Forms**

**Action Item:** Mo will be adding acceptance of expanded metals to the Construction Manual as an option for forming cold joint.

### **Work Access for Bridges**

The bridge office doesn't want to put wording in the special provisions that restates the environmental permits. They don't want to restate what is shown in other places in the contract.

The contractors thought it would be useful to have a drawing showing span lengths and the number of piling for work trestles so the contractors could see what the permits how the permits were developed.

Everyone agreed that the permits need to be attached to the contract document; the Northwest Region is now putting environmental compliance plans that show the environmental work.

**Action Item:** Mo will have the Bridge design reevaluate the request

### **Expansion Joint Headers**

**Action Item:** Dow Corning 902 still needs to be shown on the plans, and saw cutting of the concrete headers instead of forming them will be added to the Specials an acceptable option. Also, rounding of the joint edges as an alternate to chamfering will be added.

### **Roughening of core drill holes with a rotohammer drill**

The tests were conducted with the doweled bars with roughened surfaces in the hole; most contractors didn't think the roughening was necessary.

More work needs to be done researching this to see if there is any effect on the bolt pullout strength.

**Action Item:** Mo and Mark Hammer are going to check if they can find any results on the difference caused by smooth holes vs. roughened holes. Mark Hammer is going to see if they had any difference in their load results on the deception pass bridge.

### **Joint meeting with WACA on curing of concrete cylinders**

Charlie attended the November WACA meeting and reported that the concrete suppliers were adamant that the ASTM curing requirements be followed, and that the temp. in the first 24 hours be maintained at 78 degrees. The new WSDOT cylinder transmittal will have a block that needs to be filled in that tells what the concrete cylinder temp. is in the first 24 hours.

Mo is going to check and see if the new WSDOT requirements are per the ASTM spec's., he's also going to see how other states are following this requirement.

There was a discussion about how to pay for this spec. whether the payment should be per each curing box or lump sum.

Most people thought that the power requirements for curing of the cylinders and the locking requirement were taken out of the ASTM.

**Action Item:** Mo is going to see how other states are administering this ASTM requirement.

### **Mortar Block Acceptance**

Mo asked if the Contractors have had a problem with strength non-compliance of the mortar blocks in the past. None was encountered based on replies from the team.

**Action Item:** Delete the strength requirement and go to a visual acceptance for the blocks, if they hold up the bars and don't crush during construction they're acceptable.

### **Use of Self Compacting Concrete (SCC) in WSDOT Projects**

Fabricators are currently using SCC on median barriers and catch basins. The industry worldwide is using more and more of SCC in concrete placements especially in situations with heavy reinforcing congestion. Mo said WSDOT was agreeable to the use of SCC for certain structural components provided WSDOT's performance specifications are achieved. The only problem seems to be in the testing and research necessary to make the mixes work in each individual location. The mix performance is very sensitive to changes in admixtures and proportioning of the ingredients.

**Action Item:** For information only.

### **Spread Footings in High Ground Water**

A contractor has a job that required the end abutment be placed in a cofferdam with a seal. After pumping the cofferdam, seal placement water intrusion into the cofferdam was approx. 400 gallons per minute. This water had a high PH because of the seal placement and had to have the PH reduced to discharge the water, this was costly. Shaft construction on this pier instead of the cofferdam and seal was more costly initially but factoring the water treatment costs the shaft construction maybe a cheaper solution.

**Action Item:** For information only

### **Use of Colloidal Mixer and Non-Segregating Grouts**

WSDOT handed out two sheets showing two different grout mixers, one a std. mixer and the other a colloidal grout mixer. The handout showed the cost to use a colloidal mixer vs. our std. mixer with the cost difference between the two options being about \$1500 dollars or 1 to 2 percent of the cost of the post tensioning on a std. box girder bridge.

Most contractors didn't have an issue using colloidal mixers. The colloidal mixers provide a better mixed grout. About half of the states nationwide specify colloidal mixers for their grouting on post tensioned bridges.

### **End of Year Review of Accomplishments Future Goals**

This is the last committee meeting for the year and Mo recapped what the committee had accomplished and then asked what we should look forward to in the coming year. Mo indicated that the State will focus on:

- Broader use of SCC
- Better construction practices improving durability
- Innovative materials and construction practices

Some committee members wanted to focus on the following issues:

- Curing Boxes
- DOE Issues, PH Issues, having water quality issues mitigated during design

The meeting adjourned at 12:00 PM

The next scheduled meetings for 2006 are:

Jan. 27  
Feb. 24  
March 24  
April 28  
May 19  
June 30